

REMARKS

Rejections under 35 USC §112, Second Paragraph

Claim 1, 4 and 5 were rejected under 35 USC §112, second paragraph, as allegedly being incomplete for omitting essential structural cooperative relationships of elements.

Accordingly, claim 1 has been amended to overcome the rejection.

Claims 4 and 5 have been cancelled making the rejection to these claims moot.

Rejections under 35 USC §102(b)

Claim 1 was rejected under 35 USC §102(b) as being anticipated by Deng et al. (U.S. Patent No. 5,980,977).

The Examiner alleged as follows:

Regarding claim 1, Deng teach (col. 12/48 through col. 13/I. 3) a metal oxynitride electrode catalyst (col. 7/II. 56-67) comprising an oxynitride containing at least one transition metal element selected from the group consisting of La, Ta, Nb, Ti, and Zr, the metal oxynitride electrode catalyst, wherein atomic ratio of (transition metal element):(oxygen):(nitrogen) is $(1 \pm 0.1):(1 \pm 0.1):(1 \pm 0.1)$.

Claim 1 has been amended to be directed to a “water electrolysis system” reciting “an acidic electrolyte contacting said metal oxynitride electrode catalyst; wherein said metal oxynitride electrode catalyst having a potential of 0.4 V or higher relative to the reversible hydrogen electrode potential in said acidic electrolyte.”

Deng et al does not teach or suggest “an acidic electrolyte contacting said metal oxynitride electrode catalyst; wherein said metal oxynitride electrode catalyst having a potential

of 0.4 V or higher relative to the reversible hydrogen electrode potential in said acidic electrolyte.”

For at least these reasons, claim 1 patentably distinguishes over Deng et al.

Rejections under 35 USC §103(a)

Claim 2, 4 and 5 were rejected under 35 USC §103(a) as being obvious over Deng et al. (U.S. Patent No. 5,980,977) in view of Clerc et al (U.S. Patent 6,190,802).

Claims 4 and 5 are cancelled making the rejection of these claim moot.

Claim 2 depends from claim 1 which patentably distinguishes over Deng et al. as discussed above. Clerc et al. has been cited for allegedly disclosing that metal oxynitride electrode catalyst is dispersed as fine particles on a catalyst carrier which is an electronically conductive powder. Such disclosure of Clerc et al., however, does not remedy the deficiencies of Deng et al. discussed above.

For at least these reasons, claim 2 patentably distinguishes over Deng et al. and Clerc et al.

New Claims

New claims 6-9 have been added. Claims 6 and 7 are directed to an organic electrolysis system and claims 8 and 9 are directed to a fuel cell.

Like claim 1, independent claims 6 and 8 both recite “water electrolysis system” reciting “an acidic electrolyte contacting said metal oxynitride electrode catalyst; wherein said metal oxynitride electrode catalyst having a potential of 0.4 V or higher relative to the reversible

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hydrogen electrode potential in said acidic electrolyte.”

In view of the aforementioned amendments and accompanying remarks, Applicants submit that the claims, as herein amended, are in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants’ undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP



Sadao Kinashi
Attorney for Applicants
Registration No. 48,075
Telephone: (202) 822-1100
Facsimile: (202) 822-1111

SK/ar